

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) Process for desulphating a solid mixture resulting from the breaking up of lead-acid batteries, comprising electrode slime residues containing lead compounds belonging to the groups comprising oxides, oxysulphates (lanarkite) and sulphates, ~~characterised~~ characterized in that said lead compounds are put in contact with the aqueous solution containing in contact with a aqueous solution containing alkali carbonate (sodium or potassium carbonate) in the stoichiometric quantity sufficient for sulphate concentrations present in the electrode slime, plus an excess of between 0.01% and 10%, and alkali (sodium, potassium) hydroxides which dissolve lanarkite in a molar ration of carbonate to alkali of between 1 and 2.75, in which the said lead compounds are suspended, the solid phase of the suspension of being subjected to the fragmenting action of shear and compression forces exerted by brushing, scraping and compressing mechanical means.

2. (Currently Amended) Desulphating process according to claim 1, ~~characterised~~ characterized in that the carbonate/solvent molar ration is less than 1.

3. (Currently Amended) Desulphating process according to claim 1, ~~characterised~~ characterized in that the ratio by weight between water and the suspended solid phase lies between 0.6 and 5.

4. (Currently Amended) Desulphating process according to claim 1, ~~characterised~~ characterized in that the sodium carbonate in the said solution is in excess with respect to the stoichiometric quantity necessary for the quantity of sulphate present up to a maximum of 10 percentage points and the carbonate/alkali molar ratio may be between 1 and 2.75.

5. (Currently Amended) Desulphating process according to claim 1, ~~characterised~~ characterized in that the contact time necessary for almost total conversion of the lead sulphate to lead carbonate is between 30 and 90 minutes.

6. (Currently Amended) Desulphating process according to ~~any of the preceding claims~~ claim 1, ~~characterised~~ characterized in that it takes place at a temperature between ambient temperature and the boiling point of the solution.

7. (Currently Amended) Process according to claim 6, ~~characterised~~ characterized in that it takes place at a temperature of between 60 and 100°C.

8. (Currently Amended) Pyrometallurgical process for the recovery of lead from lead-acid battery electrode slime residues without the use of iron in the charge, ~~characterised~~ characterized in that the said residues are first desulphated in accordance with the procedure according to claim 1 until they are substantially free of lead sulphate.

9. (New) Desulphating process according to claim 2, characterized in that it takes place at a temperature between ambient temperature and the boiling point of the solution.

10. (New) Desulphating process according to claim 3, characterized in that it takes place at a temperature between ambient temperature and the boiling point of the solution.

11. (New) Desulphating process according to claim 4, characterized in that it takes place at a temperature between ambient temperature and the boiling point of the solution.

12. (New) Desulphating process according to claim 5, characterized in that it takes place at a temperature between ambient temperature and the boiling point of the solution.